

Amendments to the Claims

This listing of claims, if entered, will replace all prior versions and listings of claims in the above-identified application.

Listing of Claims

1 - 115. Canceled

116. (Previously Presented) A method comprising:
receiving at least one SQL statement, at a computer system, wherein
the at least one SQL statement is configured to operate on a first table and
a second table, and
the at least one SQL statement comprises an SQL statement that is
configured to join the first table and the second table;
automatically generating, using a processor of the computer system, a set of SQL
statements to query the first table and the second table, wherein
the set of SQL statements are based, at least in part, upon the at least one
SQL statement,
the first table and the second table are stored in a computer-readable
storage medium of the computer system,
the automatically generating uses a relationship between the first table and
the second table to generate the set of SQL statements, and
the set of SQL statements comprises SQL statements other than the at least
one SQL statement;
producing a first result set by querying the first table using the set of SQL
statements, wherein
the querying the first table is performed using the processor;
producing a second result set by querying the second table using the set of SQL
statements, wherein
the querying the second table is performed using the processor, and
the querying the first table and the querying the second table are
performed without joining the first table and the second table;

joining, using the processor, the first result set and the second result set to produce a third result set; and
returning the third result set, in response to the receiving the at least one SQL statement.

117. (Previously Presented) The method of claim 116 wherein the relationship comprises:

a parent/child relationship between the first and second tables, wherein
one of the first and second tables is a parent table, and
if the first table is the parent table, the second table is a child table, and
if the second table is the parent table, the first table is the child table.

118. (Previously Presented) The method of claim 117 further comprising:
querying the parent table using the set of SQL statements to produce the first result set; and

using the first result set in constructing a second set of SQL statements to query the child table, wherein
the second set of SQL statements comprises SQL statements other than a second statement that joins the second table to another table.

119. (Previously Presented) The method of claim 118 further comprising:
querying the child table using the second set of SQL statements to produce the second result set.

120. (Currently Amended) The method of claim 119 wherein
the third result set depends on the querying the first table and the querying the second table, wherein

the querying the first table is performed using the processor to
execute the set of SQL statements against the first table to
produce the first result set, and
the querying the second table is performed using the processor to
execute the second set of SQL statements against the second
table to produce the second result set.

121. (Previously Presented) The method of claim 118 wherein the second set of SQL statements comprises:
- a query statement for selecting a record having a value of a foreign key field of the second table equal to a value of a target key field in the first result set.
122. (**Currently Amended**) The method of claim 116 further comprising: using the first result set in constructing a second set of SQL statements to query the second table, wherein the second set of SQL statements comprises SQL statements other than a second statement that joins the second table to another table,
wherein
the querying the first table is performed using the processor to
execute the set of SQL statements against the first table to
produce the first result set, and
the querying the second table is performed using the processor to
execute the second set of SQL statements against the second
table to produce the second result set.
123. (Previously Presented) The method of claim 122 further comprising: querying the second table using the second set of SQL statements to produce the second result set.
124. (Previously Presented) The method of claim 123 further comprising: returning the third result set as a result of the query of the first and second tables.
125. (Previously Presented) The method of claim 122 wherein the second set of SQL statements comprises:
- a query statement for selecting a record having a value of a foreign key field of the second table equal to a value of a target key field in the first result set.

126. (Previously Presented) The method of claim 116 further comprising:
obtaining a search specification for the query of the first and second tables,

wherein

the set of SQL statements comprises a query statement to select a record
from at least one of the first and second tables if the record
satisfies the search specification.

127. (Previously Presented) The method of claim 126 further comprising:
executing the set of SQL statements to produce the third result set; and
returning the third result set in response to the search specification.

128. (Previously Presented) A system comprising:

a processor;

a memory unit coupled to the processor;

receiving means for receiving at least one SQL statement, wherein

the at least one SQL statement is configured to operate on a first table and
a second table, and

the at least one SQL statement comprises an SQL statement that is
configured to join the first table and the second table;

generating means for automatically generating a set of SQL statements to query
the first table and the second table, wherein

the set of SQL statements are based, at least in part, upon the at least one
SQL statement,

the generating means uses a relationship between the first table and the
second table to generate the set of SQL statements, and

the set of SQL statements comprise SQL statements other than the at least
one SQL statement;

determining means for determining if a parent/child relationship exists between
the first and second tables;

first producing means for producing a first result set by querying the first table
using the set of SQL statements;

second producing means for producing a second result set by querying the second table using the set of SQL statements, wherein
the querying the first table and the querying the second table are
performed without joining the first table and the second table;
joining means for joining the first result set and the second result set to produce a third result set, wherein
the generating means, the determining means, the first querying means,
the second querying means and the joining means reside in the
memory unit; and
returning means for returning the third result set, in response to receiving the at least one SQL statement.

129. (Previously Presented) The system of claim 128 further comprising:
parent table determining means for determining if one of the first and second tables is a table, if the parent/child relationship exists, and configured to indicate
if the first table is the parent table, that the second table is a child table,
and
if the second table is the parent table, that the first table is the child table,
wherein
the parent table resides in the memory unit.

130. (Previously Presented) The system of claim 129 further comprising:
querying means for querying the parent table using the set of SQL statements to produce the first result set; and
using means for using the first result set in constructing a second set of SQL statements to query the child table, wherein
the second set of SQL statements comprises SQL statements other than a second statement that joins the second table to another table, and
the querying means and the using means reside in the memory unit.

131. (Currently Amended) The system of claim 130 wherein the second querying means is configured to query the child table using the second set of SQL statements to produce the second result set, wherein the first producing means is configured to query the first table by executing the set of SQL statements against the first table to produce the first result set, and the second producing means is configured to query the second table by executing the second set of SQL statements against the second table to produce the second result set.
132. (Previously Presented) The system of claim 131 wherein the result depends on the querying the first table and the querying the second table.
133. (Previously Presented) The system of claim 130 wherein the second set of SQL statements comprises:
a query statement for selecting a record having a value of a foreign key field of the second table equal to a value of a target key field in the first result set.
134. (Currently Amended) The system of claim 128 further comprising: using means for using the first result set in constructing a second set of SQL statements to query the second table, wherein the second set of SQL statements comprises SQL statements other than a second statement that joins the second table to another table, and said using means resides in the memory unit,
the first producing means is configured to query the first table by executing the set of SQL statements against the first table to produce the first result set, and the second producing means is configured to query the second table by executing the second set of SQL statements against the second table to produce the second result set.

135. (Previously Presented) The system of claim 128 further comprising:
obtaining means for obtaining a search specification for the query of the first and
second tables, wherein
the set of SQL statements comprises a query statement to select a record
from at least one of the first and second tables if the record
satisfies the search specification, and
said obtaining means resides in the memory unit.
136. (Previously Presented) The system of claim 135 further comprising:
executing means for executing the set of SQL statements to produce the third
result set; and
returning means for returning the third result set in response to the search
specification, wherein
said the executing means and the returning means reside in the memory
unit.
137. (Previously Presented) A computer program product comprising:
receiving instructions to receive at least one SQL statement, wherein
the at least one SQL statement is configured to operate on a first table and
a second table, and
the at least one SQL statement comprises an SQL statement that is
configured to join the first table and the second table;
generating instructions to automatically generate a set of SQL statements to query
the first table and the second table, wherein
the set of SQL statements are based, at least in part, upon the at least one
SQL statement,
the generating instructions are configured to use a relationship between the
first table and the second table, and
the set of SQL statements comprises SQL statements other than the at least
one SQL statement;
first producing instructions to produce a first result set by querying the first table
using the set of SQL statements;

second producing instructions to produce a second result set by querying the second table using the set of SQL statements, wherein the querying the first table and the querying second table are performed without joining the first table and the second table; joining instructions to join the first result set and the second result set to produce a third result set; returning instructions to return the third result set, in response to receiving the at least one SQL statement; and a computer-readable storage medium, wherein the computer program product is encoded in the computer-readable storage media.

138. (Previously Presented) The computer program product of claim 137 wherein the relationship comprises:

a parent/child relationship between the first and second tables, wherein one of the first and second tables is a parent table, if the first table is the parent table, the second table is a child table, and if the second table is the parent table, the first table is the child table.

139. (Previously Presented) The computer program product of claim 138 further comprising:

querying instructions configured to query the parent table using the set of SQL statements to produce the first result set; and using instructions configured to use the first result set in constructing a second set of SQL statements to query the child table, wherein the second set of SQL statements comprises SQL statements other than a second statement that joins the second table to another table.

140. (Previously Presented) The computer program product of claim 139 wherein the querying the second table queries the child table using the second set of SQL statements to produce the second result set.

141. (Currently Amended) The computer program product of claim 140 wherein

the third result set depends on the querying the first table and the querying the second table,

the querying the first table executes the set of SQL statements against the first table to produce the first result set, and
the querying the second table executes the second set of SQL statements against the second table to produce the second result set.

142. (Previously Presented) The computer program product of claim 139 wherein

the second set of SQL statements comprises:

a query statement for selecting a record having a value of a foreign key field of the second table equal to a value of a target key field in the first result set.

143. (Previously Presented) The computer program product of claim 137 further comprising:

using instructions configured to use the first result set to construct a second set of SQL statements to query the second table, wherein

the second set of SQL statements comprises SQL statements other than a second statement that joins the second table to another table.

144. (Currently Amended) The computer program product of claim 137 further comprising:

obtaining instructions configured to obtain a search specification for the query of the first and second tables, wherein

the set of SQL statements comprises a query statement to select a record from at least one of the first and second tables if the record satisfies the search specification, **wherein**

the querying the first table executes the set of SQL statements against

the first table to produce the first result set, and

the querying the second table executes the second set of SQL

statements against the second table to produce the second

result set.

145. (Previously Presented) The computer program product of claim 144 further comprising:

executing instructions configured to execute the set of SQL statements to produce the third result set; and

returning instructions configured to return the third result set in response to the search specification.

146. (Previously Presented) A computer system comprising:

a processor to execute instructions; and

a memory to store the instructions, wherein

the memory is coupled to the processor, and

the instructions comprise:

receiving instructions configured to receive at least one SQL statement, at a computer system, wherein

the at least one SQL statement is configured to operate on a first table and a second table, and

the at least one SQL statement comprises an SQL statement that is configured to join the first table and the second table;

generating instructions configured to automatically generate a set of SQL statements to query the first table and the second table, wherein
the set of SQL statements are based, at least in part, upon the at least one SQL statement,
the generating instructions use a relationship between the first table and the second table to generate the set of SQL statements, and
the set of SQL statements comprises SQL statements other than the at least one SQL statement,
first producing instructions to produce a first result set by querying the first table using the set of SQL statements;
second producing instructions to produce a second result set by querying the second table using the set of SQL statements, wherein
the querying instructions to the first table and the querying instructions to the second table are performed without joining the first table and the second table;
joining instructions to join the first result set and the second result set to produce a third result set; and
returning instructions to return the third result set, in response to receiving the at least one SQL statement.

147. (Previously Presented) The computer system of claim 146 wherein the relationship comprises:

a parent/child relationship between the first and second tables, wherein

one of the first and second tables is a parent table,

if the first table is the parent table, the second table is a child table, and

if the second table is the parent table, the first table is the child table.

148. (Previously Presented) The computer system of claim 147 wherein the instructions further comprise:
querying instructions configured to query the parent table using the set of SQL statements to produce the first result set; and
using instructions configured to use the first result set in constructing a second set of SQL statements to query the child table, wherein
the second set of SQL statements comprises SQL statements other than a second statement that joins the second table to another table.

149. (Previously Presented) The computer system of claim 148 wherein the querying the second table queries the child table using the second set of SQL statements to produce the second result set.

150. **(Currently Amended)** The computer system of claim 149 wherein the third result set depends on the querying the first table and the querying the second table,

the querying the first table executes the set of SQL statements against the first table to produce the first result set, and
the querying the second table executes the second set of SQL statements against the second table to produce the second result set.

151. (Previously Presented) The computer system of claim 148 wherein the second set of SQL statements comprises:
a query statement for selecting a record having a value of a foreign key field of the second table equal to a value of a target key field in the first result set.

152. **(Currently Amended)** The computer system of claim 146 wherein the instructions further comprise:
using instructions configured to use the first result set to construct a second set of SQL statements to query the second table, wherein
the second set of SQL statements comprises SQL statements other than a second statement that joins the second table to

another table,

the querying the first table executes the set of SQL statements against the first table to produce the first result set, and
the querying the second table executes the second set of SQL statements against the second table to produce the second result set.

153. (Previously Presented) The computer system of claim 146 wherein the instructions further comprise:

obtaining instructions configured to obtain a search specification for the querying of the first and second tables, wherein the set of SQL statements comprises a query statement to select a record from at least one of the first and second tables if the record satisfies the search specification.

154. (Previously Presented) The computer system of claim 154 wherein the instructions further comprise:

executing instructions configured to execute the set of SQL statements to produce the third result set; and returning instructions configured to return the third result set in response to the search specification.

155. (Previously Presented) A computer system comprising:
a processor;
a memory unit coupled to the processor;
a receiving module configured to receive at least one SQL statement, wherein the at least one SQL statement is configured to operate on a first table and a second table, and
the at least one SQL statement comprises an SQL statement that is configured to join the first table and the second table;
a generating module configured to automatically generate a set of SQL statements to query the first table and the second table, wherein

the set of SQL statements are based, at least in part, upon the at least one SQL statement,
the generating module uses a relationship between the first table and the second table, and
the set of SQL statements comprises SQL statements other than the at least one SQL statement;
a first producing module configured to produce a first result set by querying the first table using the set of SQL statements;
a second producing module configured to produce a second result set by querying the second table using the set of SQL statements, wherein
the querying of the first table and the querying of the second table are performed without joining the first table and the second table;
a joining module configured to join the first result set and the second result set to produce a third result set, wherein
the generating module, the determining module, the first producing module, the second producing module and the joining module reside in the memory unit; and
a return output data module configured to return the third result set, in response to receiving the at least one SQL statement.

156. (Previously Presented) The computer system of claim 155 wherein the relationship comprises:

a parent/child relationship between the first and second tables, wherein
one of the first and second tables is a parent table,
if the first table is the parent table, the second table is a child table,
if the second table is the parent table, the first table is the child table, and
the parent table resides in the memory unit.

157. (Previously Presented) The computer system of claim 156 further comprising:

a querying module configured to query the parent table using the set of SQL statements to produce the first result set; and

a using module configured to use the first result set in constructing a second set of SQL statements to query the child table, wherein
the second set of SQL statements comprises SQL statements other than a
second statement that joins the second table to another table, and
the querying module and the using module reside in the memory unit.

158. (Previously Presented) The computer system of claim 157 wherein
the querying the second table queries the child table using the second set of SQL
statements to produce the second result set.

159. (**Currently Amended**) The computer system of claim 158 wherein
the third result set depends on the querying the first table and the querying the
second table,

**the first producing means is configured to query the first table by executing
the set of SQL statements against the first table to produce the first
result set, and
the second producing means is configured to query the second table by
executing the second set of SQL statements against the second table to
produce the second result set.**

160. (Previously Presented) The computer system of claim 157 wherein
the second set of SQL statements comprises:
a query statement for selecting a record having a value of a foreign key
field of the second table equal to a value of a target key field in the
first result set.

161. (**Currently Amended**) The computer system of claim 155 further
comprising:
a using module configured to use the first result set to construct a second set of
SQL statements to query the second table, wherein
the second set of SQL statements comprises SQL statements other than a
second statement that joins the second table to another table, and
said using module resides in the memory unit, **wherein**

**the first producing means is configured to query the first table by
executing the set of SQL statements against the first table to
produce the first result set, and
the second producing means is configured to query the second table
by executing the second set of SQL statements against the
second table to produce the second result set.**

162. (Previously Presented) The computer system of claim 155 further comprising:
an obtaining module configured to obtain a search specification for the query of
the first and second tables, wherein
the set of SQL statements comprises a query statement to select a record
from at least one of the first and second tables if the record
satisfies the search specification, and
said obtaining module resides in the memory unit.

163. (Previously Presented) The computer system of claim 162 further comprising:
an executing module configured to execute the set of SQL statements to produce
the third result set; and
a returning module configured to return the third result set in response to the
search specification, wherein
said the executing module and the returning module reside in the memory
unit.